to measure quality of life. The clinical parameters used in the model take into account the results from a MTC of clinical trials. In order to adapt the model to the Portuguese context, several adjustments were made to its original version. These mainly relate to mortality rates by gender and to the unit costs of medical resources, such as drugs, medical visits, admissions, ancillary tests and so on, that were obtained from public official sources. We applied a 5% discount rate and conducted an analysis for a hypothetical cohort of 1,000 patients. **RESULTS:** The treatment of RA with etanercept is more expensive than that with the comparator. Nevertheless, QALYs gained do compensate for the additional costs. Overall, ICER is €12,853, which is below the usual willingness to pay threshold used in Portugal. A sensitivity analysis was carried out, which confirmed the robustness of these results. **CONCLUSIONS:** According to our analysis, etanercept is a cost-effective alternative versus golimumab for the treatment of rheumatoid arthritis. Its main advantage over the selected comparator relates to the associated improvements in health related quality of life.

PMS47

THE IMPACT OF DISEASE MODIFICATION ON THE COST-EFFECTIVENESS OF PEGLOTICASE FOR THE TREATMENT OF SEVERE DEBILITATING CHRONIC TOPHACEOUS GOUT IN ADULT PATIENTS

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OBJECTIVES: To determine the cost-effectiveness of pegloticase (Krystexxa®) for patients with severe debilitating chronic tophaceous gout (SDCTG), from a UK health care perspective. **METHODS:** Severe debilitating chronic tophaceous gout (SDCTG) is a debilitating disease, with high unmet medical need. Existing treatments mainly provide symptom relief and do not modify the disease course. Pegloticase has the potential to be a disease modifying agent. A decision analytical model was built to compare the use of pegloticase in patients with SDCTG with best supportive care (BSC) with a Markov model used to extrapolate outcomes to a 20 year time-horizon. In the basecase, the disease modifying properties of pegloticase were modelled. In scenario analyses only symptomatic relief of pegloticase on acute attacks and tophi was included. **RESULTS:** In the basecase, the cost-effectiveness of pegloticase compared to BSC was £31,027 per QALY gained. In this basecase, pegloticase dramatically reduced the uric acid burden in over 60% of patients who completed a six month course and were assumed could then be controlled on xanthine oxidase inhibitor maintenance treatment. In a pessimistic scenario whereby pegloticase was assumed to only provide symptomatic relief, the ICER was £48,672/QALY gained. In a further scenario whereby utility benefits were limited to only short-term reduction in acute flares and presence of tophi, the ICER was £54,345/QALY. Apart from these two drivers, the cost-effectiveness estimates were relatively stable across a range of sensitivity analyses. **CONCLUSIONS:** In the context of a highly severe and debilitating form of gout, with small patient numbers and a lack of alternative effective treatment options, pegloticase can be considered good value-for-money. Further clinical evidence is required to demonstrate the disease modifying properties of pegloticase. However, such data collection and hence the ability to perform robust economic evaluations for HTA purposes is difficult especially when the sponsoring company is small with limited funds.

PMS48

COMPARISON OF DIAGNOSTIC STRATEGIES TO DETECT PREVALENT VERTEBRAL FRACTURE FOR ADULTS OVER AGE 50: USE OF VERTEBRAL FRACTURE ASSESSMENT OR SPINE RADIOGRAPHY

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OBJECTIVES: The prevalent vertebral fracture (VF) is a risk factor for future VF, which can be decreased with drug therapy. However, most VFs are not recognized clinically. Vertebral fracture assessment (VFA) by dual-energy x-ray absorptiometry (DXA) and spine x-ray can be performed to detect these prevalent VFs. This study aimed to estimate the costs, effectiveness, and radiation exposure of VF diagnostic strategies. **METHODS:** Markov model over a 10-year period was used to calculate the medical costs for diagnostic tests and VF treatment, the reduction of incident VFs of patients who have experienced a VF, and the radiation doses in target population aged over 50. We compared three strategies: 'VFA followed by confirmatory radiography (VFA screening)', 'only VFA' and 'only x-ray' every 2 years, to 'no screening before recognition'. We assumed that all patients tested positive for VF received drug therapy. A discount rate of 5% was applied in cost. **RESULTS:** The results showed the incremental costs for women over age 50 who had VFA screening, only VFA, and only x-ray were $1,112, $1,546, and $1,270 per person, respectively. Future VF incidence was reduced by 29% in both VFA screening and only VFA and 35% in only x-ray as compared with no screening for 10 years. Radiation exposure was highest in the only x-ray strategy. Also, the effectiveness and medical costs were more increased in female and old age people than in male and over age 50. The sensitivity analyses showed that these results are robust to variety assumptions including cycle length, medical costs, and diagnostic accuracy. **CONCLUSIONS:** This study suggests that VFA screening strategy can be relevant option for new VF prevention as considering lower cost and less radiation. This study is expected to provide useful information as establishing the VF diagnostic strategy in clinical practice.

PMS49

COST-EFFECTIVENESS MODEL OF DUAL-MOBILITY CUPS FOR TOTAL HIP REPLACEMENT IN FRANCE

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OBJECTIVES: To estimate the incremental cost-effectiveness ratio (ICER) of dual-mobility cups (MBH) when used instead of conventional cups (FBH) to help reduce dislocation rates following total hip replacement (THR) in France. **METHODS:** A Markov model simulated two cohorts of patients: one with MBH and one with FBH. Three different states of health were considered: "stable", "dislocation/revision" and "death". The model adopted a collective perspective and the time horizon of the model was lifetime. Dislocation/revision rates were estimated using two different sources: literature review and expert opinions (analysis 1) and analysis of the PMSI (French hospital database) of Patients having one THR in 2009 followed through the end of 2012 (analysis 2). Costs considered were hospitalization costs (reduction/revision for dislocation performed in acute care unit and care in rehabilitation units), valued using the National Scale Costs with Common methodology (ENCC). Outpatients' costs were considered for patients going back home after hospitalization and valued by expert opinions and literature data. The model estimated the number of dislocations/revisions for each cohort and differences between the two groups in terms of QALY gained, costs and cost-effectiveness ratio. Deterministic and probabilistic sensitivity analyses (PSA) were conducted. **RESULTS:** In analysis 1 for a 100,000 THR cohort, 4,626 dislocations and 1,243 revisions were avoided. Total number of QALY gained was 894 and total economic gain €44.7 million. In analysis 2, 3, 176 dislocations and 854 revisions were avoided for an economic gain of €30.7 million and a gain of 611 QALY. Reported to 100,000 THR, the economic gain per MBH cup was €447 or €307. PSA estimated the mean ICER to €-55,693 per QALY gained. **CONCLUSIONS:** Because of the current rules of tariffs used in France and given the absence of additional costs associated with the use of DM prosthesis, this strategy can be considered dominant in THR.

PMS50

COST-EFFECTIVENESS OF MULTIPLE ANTI-OSTEOPOROTIC THERAPIES FOR SECONDARY FRACTURE PREVENTION IN JAPAN

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OBJECTIVES: The purpose of this study was to estimate the cost-effectiveness of multiple anti-osteoporotic drug therapies for secondary prevention of fractures in elderly women with osteoporosis in Japan. **METHODS:** A state transition model with nine health states (seven types of post-fracture, bedridden, and death) was developed to predict lifetime costs and quality-adjusted life years (QALY) of no anti-osteoporotic therapy and eight drug therapies in patients with a previous vertebral fracture. Incidence of hip, vertebral, and other fracture associated with age and bone mineral density (BMD) was estimated by using a regression approach based on epidemiologic studies in Japan. Comparative effectiveness of anti-osteoporotic drug therapies was derived from a published network meta-analysis. For the base-case analysis, we ran the model with T-score of -2.5 and different age (65, 70, and 75 years). Probabilistic sensitivity analysis was performed to assess parameter uncertainty. **RESULTS:** Alendronate therapy dominated all other strategies, resulting in 11.746 QALY and lifetime costs of $34,568. Compared to no preventive therapy, alendronate conferred an additional 0.458 QALY and saved lifetime costs of $13,753. Risedronate was equally cost-effective, resulting in 11.731 QALY and costs of $34,932. Applying a willingness to pay threshold of $50,000 per QALY, the probability of being cost-effective were estimated to 76.2 % and 23.8% for alendronate and risedronate, respectively. These results did not change in women aged 70 and 75 years. **CONCLUSIONS:** Bisphosphonate therapies for secondary prevention of fractures in elderly women would be cost-effective in terms of Japan health care system.

PMS51

PHARMACOECONOMIC ANALYSIS TOFACITINIB USE IN RHEUMATOID ARTHRITIS TREATMENT SCHEME

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OBJECTIVES: Evaluate most rationale medical technology in the rheumatoid arthritis therapy (RA) (comparison of alternatives – GEBDs Tofacitinib and biologics: Infliximab, Abatacept, Certolizumab pegol, Golimumab, Adalimumab and Tocilizumab) from pharmacoeconomic analysis point of view. **METHODS:** Analysis based on the assessment for one statistically average patient suffering from RA, and weighing 70 kilograms, over a one year course of treatment (52 weeks). The analysis done of direct costs included: cost of DMARDs and biologics therapy use; costs of drug introduction; physician visits cost. Cost-minimization and missed opportunities analysis were used. **RESULTS:** During the effectiveness analysis of RA treatment, based on the meta-analyses of randomized placebo-controlled trials data (including meta-analyses P. Kawalec, 2013; E. Salgado, 2013), Russian and international RA treatment recommendations, it was concluded that there was no statistically significant difference in efficacy and toxicity of the Tofacitinib and the biologics used in the RA treatment. One year treatment course with Tofacitinib, Infliximab, Abatacept, Golimumab, Certolizumab pegol, Adalimumab and Tocilizumab cost, include subcutaneous route of administration, will amount to 12.818 EUR, 20.932 EUR, 14.855 EUR, 18.104 EUR, 19.642 EUR, 20.120 EUR and 21.664 EUR, respectively. **CONCLUSIONS:** During pharmacoeconomic analysis was defined that therapy with Tofacitinib in comparison with biologics use will reduce the cost of a one year course of treatment for each RA patient from 2.037 EUR to 8.846 EUR. Transition of 100 RA patients onto a treatment regimen, includes Tofacitinib use, will make it possible to treat from 15 to 69 patients more suffering from this disease.

PMS52

REHABILITATION IN RESURFACING HIP ARTHROPLASTY PATIENTS: PRELIMINARY COST-EFFECTIVENESS RESULTS FROM A CLINICAL TRIAL

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